



## PATENT ABSTRACTS OF JAPAN

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**SASAKI ICHIRO****(54) APPARATUS AND METHOD FOR REMOVING CONTAMINANT****(57) Abstract:**

**PURPOSE:** To remove a contaminant on a substrate surely in a vacuum chamber under a condition like dry-process or in a dry-gas atmosphere, by providing a separating-force applying means, a separating-force vibrating means, and a variable vibration-frequency means.

**CONSTITUTION:** An apparatus for removing a contaminant on a surface of a workpiece 18 comprises a separating-force applying means for applying force to the contaminant in a direction adequate for separating the contaminant from the base body 18, a separating-force vibrating means for vibrating the separating force, and a variable vibration-frequency means for changing the frequency of the vibration. As an example, a pair of contaminant removing electrodes 4a and 4b are provided between a stage 2 and a counter electrode 3 for generating plasma in a process chamber 1. A high-frequency voltage is applied through a high-frequency amplifier 8 from a signal generator 7 to the stage 2, and a positive Dc voltage is supplied from a DC power supply 11 to the electrodes 4a and 4b while

the frequency of the high-frequency voltage from the signal generator 7 is changed continuously.

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